University Avenue

Interstate 94

Snelling Avenue

Hamline Avenue

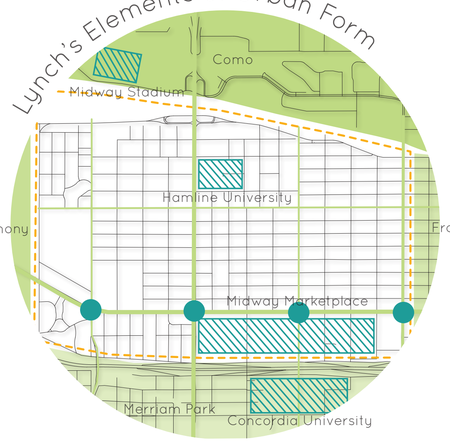
Lexington Parkway

VISIONINGPLAN

Though our design is a site-scale intervention, its intention is the creation of growth and identity in Hamline-Midway. This Visioning Plan displays the development zone (green underlay) surrounding our site that our design will influence. It shows the existing amenities in this development zone and projects the patterns in which the induced growth of the TOD will occur.

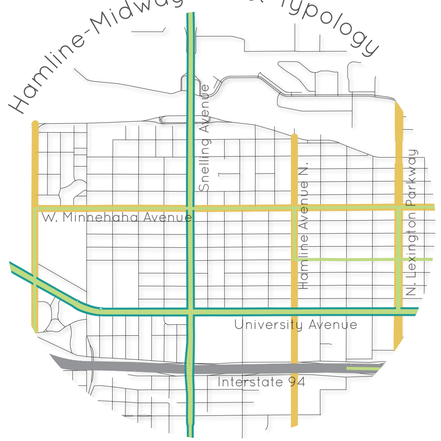
LEGEND
- Existing Neighborhood Assets
- Expected Induced Growth
- Current and Proposed Bus Routes
- Bus Stops
- Current Green Line Light Rail
- Green Line Light Rail Stops
- Proposed Bike Lanes
- Bike Share Station
- Educational Institution
- Religious Institution

Lynch's Elements of Urban Form



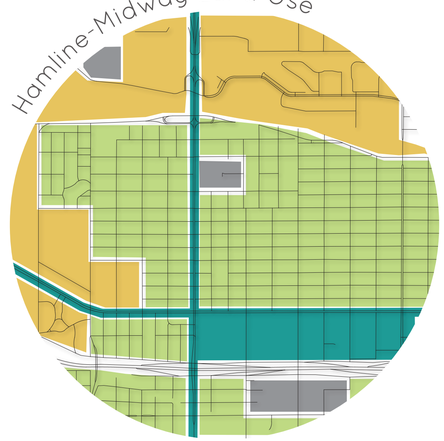
LEGEND
- Landmarks
- Nodes
- Paths
- Edges
- Districts

Hamline-Midway Street Typology



LEGEND
- Commercial Corridor
- Historic Railcar Route
- Primary Residential
- Secondary Residential
- Interstate

Hamline-Midway Land Use



LEGEND
- Residential
- Commercial
- Industrial
- Institutional

SKYLINE LOUNGE

METRO TRANSIT OFFICES

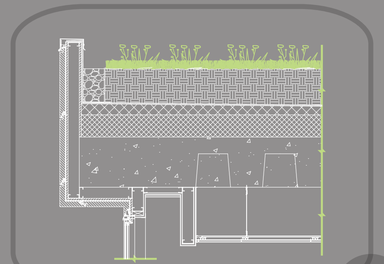
GREEN LINE PASSENGER WAITING

THE MIDWAY GRILL

MARKET @ MIDWAY

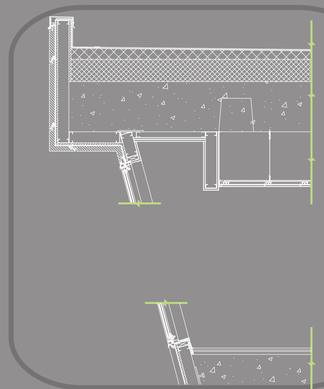
STATION ATRIUM AND TICKETING

WHEELS BIKE AND REPAIR SHOP



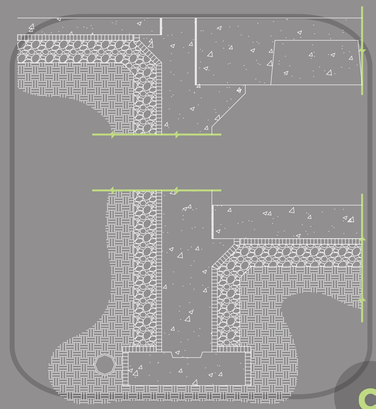
Parapet and Green Roof Detail

a



Reinforced Angled Curtain System

b



Structural Foundation System

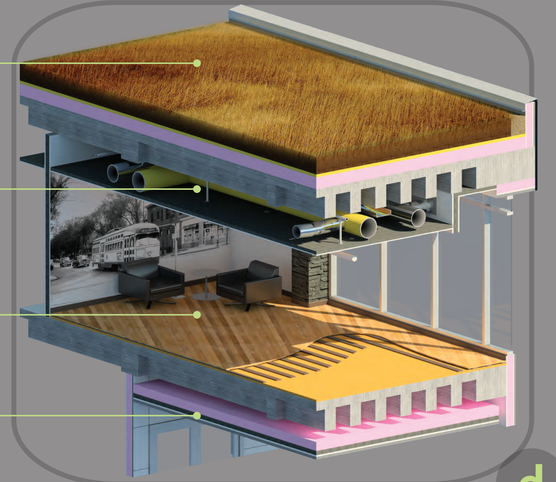
c

Extensive Green Roof
- -Vegetation
- -Growing Medium
- -Filter Fabric
- -Moisture Retention
- -Water Proof Membrane
- -Insulation
- -Precast Concrete Joists

Ceiling Assembly
- -Suspended Gypsum with Steel Stud Backup
- -Sprinkler Fire Suppression
- -Insulated Supply Air Ducts
- -Return Air Ducts
- -Electric and Cable Trays
- -Light Fixture Components

Wood Floor
- -Baseboard
- -Recycled Wood Flooring
- -Wood Slat Underlayment
- -Soundproofing / Insulation
- -Structure

Metal Panel Facade
- -Metal Panel System
- -Wood Sheathing
- -Air and Vapor Barrier
- -Cold-Formed Steel Studs
- -Soy-based Insulation
- -Interior Finish Material



d

a

b

d

c

SECTION 'A'

Longitudinal Section

SPRING AT MIDWAY STATION

SUMMER AT MIDWAY STATION

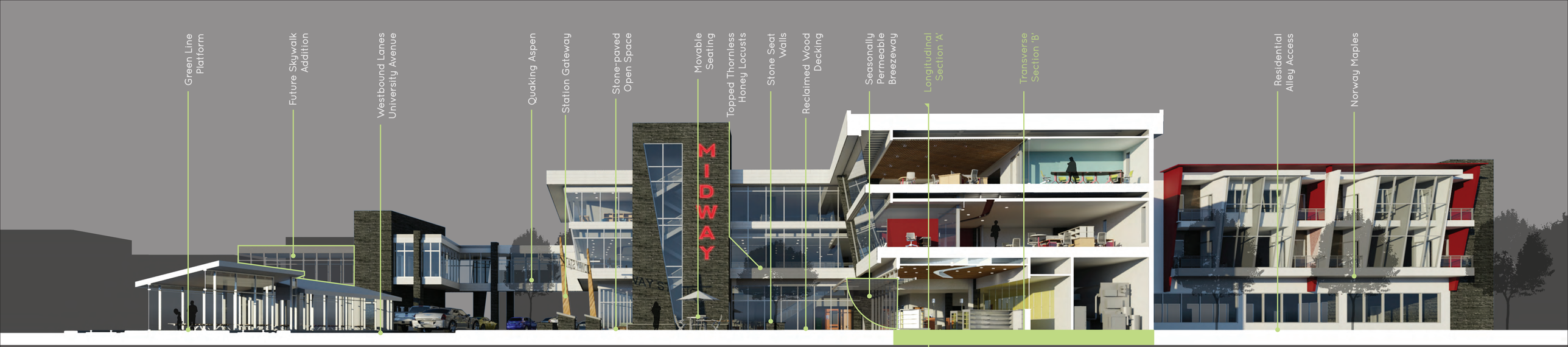
FALL AT MIDWAY STATION

WINTER AT MIDWAY STATION

THOMAS LOWRY MEMORIAL FOUNTAIN

MARKET @ MIDWAY CORRIDOR

THE MIDWAY GRILL OUTDOOR LOUNGE



EASTSECTION-ELEVATION

Transverse Section 'B'

WESTELEVATION

Dain + Sydney

Dain is a graduate student at the University of Minnesota and is working towards a masters degree in civil engineering. He lives in a studio apartment in Hamline-Midway, a few blocks away from Midway Station. Dain bartends at a small pub in downtown St. Paul and is able to take the Green Line from his house to both work and school. On the weekends, Dain likes to take his dog Sydney to the Mississippi River to go for a run by grabbing the bus from Midway Station to meet up with the regions extensive set of recreational trails.

Francis

Francis lives in a low-income apartment building on University Avenue, next to Midway Station. He works at the Archer Daniels Midland elevator in St.Paul, and commutes to work using both the Green Line and bus transit; though, he looks forward to the proposed street car on Seventh Ave. Francis is taking night classes at Hamline University to finish his teaching degree, and the bus allows him to commute from Midway Station to the university in the evenings. Francis enjoys also enjoys his close proximity to the fresh, local produce available in the Market at Midway.

Grace, Allison, Gabe + Emma

Grace and Allison met in college at the University of Wisconsin. They moved to Minnesota in 2009, and were married in 2013. They have adopted two kids since moving to Minnesota, Gabe (6) and Emma (4). They live in a house in Hamline-Midway, close to Galtier Community School, where Gabe and Emma attend. Grace works as a loan officer at 1st National Bank in downtown St. Paul, and takes the Green Line to work. Allison works as an analyst for MetroTransit, and works in their offices located on the second floor of Midway Station.

Ole + Harriet

Ole, a long time employee of the Ford factory in St. Paul, and his wife Harriet, a former school teacher, are now retired and live in an old, historic house in Hamline-Midway. They are active members of the H-M Neighborhood Association, and are involved with organizing events that bring neighbors together. Some of their favorite events include art and food fairs and seasonal festivals at Midway Station. They are also avid gardeners, and enjoy selling their produce at the weekly Midway Station farmers' market.

Rosie

Rosie grew up in the Como neighborhood of St. Paul, where her parents still live. She is a flight attendant for Delta Airlines, and is based out of the Minneapolis-St. Paul International Airport in Bloomington. Rosie chose to live in the Apartments at Midway Station because it was more affordable than many other locations in the Metro and it was also close to her aging parents. Thanks to the quick transition from the Green Line to the Blue Line in Minneapolis, she is easily able to utilize the full capacity of the light rail system for work.

Shaun

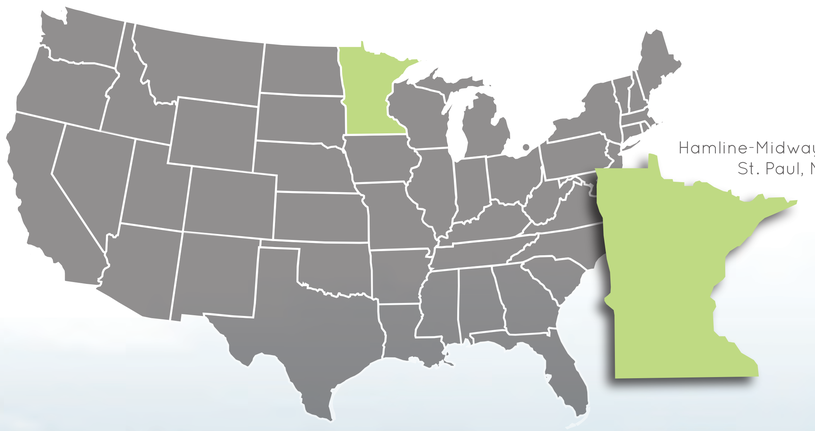
Shaun is a folk singer and songwriter from Fargo, ND who came to St. Paul to launch his music career. At night, Shaun performs gigs in small venues all over town, and likes to take the light rail when heading to his shows. When he isn't singing, Shaun works at Wheels Bike + Repair, where he builds, fixes, rents, and sells bikes. Shaun lives in a residential high-rise in downtown St. Paul, and rides his bike to the Station whenever weather permits. Shaun also enjoys the proximity of Midway Station to his favorite shopping outlet, Midway Center.

CHARACTERNARRATIVES

These fictional characters represent the diverse user groups that our site caters to. They represent people from all walks of life - from musicians to bankers and students to retirees, our design provides the connecting link which brings these characters together at Midway Station. You can find these characters activating the spaces of our design in the perspectives at left and right.

EMERGINGCONNECTIONS

DEVELOPING TRANSIT CORRIDORS IN MINNEAPOLIS - ST. PAUL



Hamline-Midway Neighborhood,
St. Paul, Minnesota

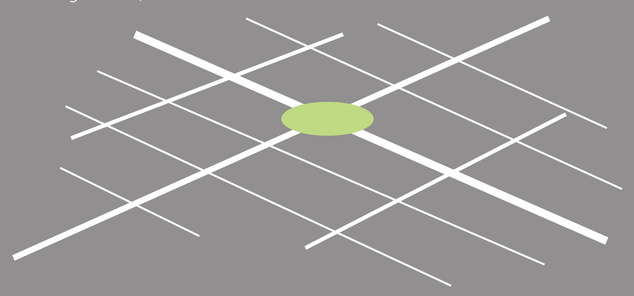
Our work explores the design of a public square and transit station at the intersection of University Avenue and Hamline Avenue in the Hamline-Midway neighborhood of St. Paul, Minnesota. Our focus is on responding to the need for transit-oriented development (TOD) through the exploration of the neighborhood placemaking principles of identity and growth. This focus upon identity and growth at the neighborhood scale allows us to define methods for improving transit corridor connections between major urban centers. Our secondary focus is on the collaboration of architecture and landscape architecture and how they work together to accomplish environmental design goals.

PROBLEMSTATEMENTS

How can the design of a public square and transit station influence the growth of transit-oriented development in a historically transit-based neighborhood?

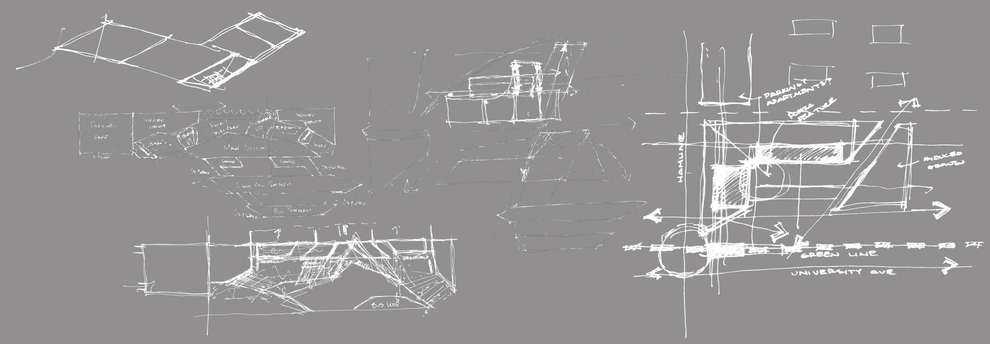
What defines identity, and how can environmental design capitalize on it to influence transit-oriented development in a historically transit-based neighborhood?

Parti Diagram | Path and Node



COLLABORATIVEPROCESS

The collaborative effort on our thesis was highlighted not by the separate duties we each took on as joint designers, but by the tasks we accomplished collectively. Site selection, conceptual work, layout development, and foundational programming were not separated into 'architecture' and 'landscape architecture' duties. Instead, we worked together as environmental designers to create a place that reads as one unified design. It was not until the development of site forms - the step after programming - that we took on our respective roles as architect and landscape architect. Even as we moved forward with specialized tasks, we continually consulted each other on our design decisions, and constantly revised our plans through discussion with each other. The collaboration was not always smooth - we encountered disagreements at nearly all stages of the design. Yet through our combined experiences, we were able to identify the better answer - or compromise - in every difficult decision.



PLACEATTACHMENT

INTERACTION

ACCESSIBILITY + LEGIBILITY

Accessibility and Legibility are site features and design components that go above and beyond universal design. Accessibility refers to the access that a site has in relation to other places while legibility accounts for the identifiable features of place that distinguish one location from another. Midway Station benefits from public transportation access, close proximity to frequently used transit routes, pedestrian connections to the greater neighborhood as well as linkages to other amenities within the Hamline-Midway. As far as legibility, the station creates a landmark of itself within the greater context through the usage of signage, architectural detailing and site components and occupant programming.

VITALITY + DIVERSITY

Site engagement plays a vital role in placemaking. Vitality, referring to the energy created through user experience, enhances site engagement in a strong and lively manner through programmatic uses that cater to all occupants of space. Diversity, like vitality, refers to the variety of uses, products and services that create site appeal and reliance all while establishing wellbeing and comfort. Hamline-Midway neighborhood is already diverse in nature with a variety of shops and services to cater the public. Our design expands on this diversity by offering more user dimension through retail, such as the market and restaurant, or services, such as the bike repair shop.

TRANSACTION, DISTINCTION + COMFORT

Site activity can be enhanced through the processes of transaction. Places that serve as staples for shopping and leisurely activity have convincing connections between functional and emotional attachment with place. Beyond transaction, comfort must also be developed through relatable scales of space. The development of corridors, sidewalks, building heights and interior/exterior spaces must recognize human scale and provide wellbeing and security. Midway Station acknowledges the need for transaction by creating unique retail and service opportunities. The station also enhances comfort through correctly scaled spaces, in both the interior and out, with appropriate floor to ceiling heights and corridor widths.

PLACEIDENTITY

SETTLEMENT

LOCATION

Location is an element that must be decided upon before beginning any form of construction. Its assessment is crucial in developing sense of place, and for Midway Station, location became key in developing form, program and even building typology. Located along the University Avenue corridor where the Green Line light rail lays its tracks, the typlogy of a transit station was decided upon to capitalize on the movement of people as well as the unique culture created by the new transit system. From there, to spur a TOD revival, a program was created based on the needs and wants of the neighboring region. Form grew from the program, but also from the constraints of the neighborhood and site.

SPATIAL CONFIGURATION

The combination of multiple spaces and enclosures define the attribute of spatial configuration. Through orientation, spaces arrange themselves in ways that alter our senses and often times define our feelings. It can either promote or weaken the chance for activity. The spatial configuration of Midway Station directly affected its program and how occupants of the design utilized its spaces. It became very important for all spaces to work well with each other, especially those direcly related to the movement from exterior to interior and vise versa.

ARTICULATION

Articulation requires the usage of known cultural symbolism such as language or culture, and it often times is a very strong and unique way to inform place. Our design capitilizes on articulation by expanding upon the unique culture present in the Hamline-Midway neighborhood. With a balance of diverse programmatic elements, the station reflects the context of University Avenue. Importance is also placed altering society's view of public transportation. Currently we look at public transit as something non-efficient or for the non-working class. With Midway Station devoting its design, form and program to transportation, our hopes are that a new language is born and a culture supporting public transit emerges.

LANDSCAPE

THINGS

Every landscape is comprised of natural elements that must not be departed from when addressing place. These elements, or 'things', are noted by their characteristics too. For instance, stone adds value of hardness and longevity while a mountain reflects characteristics of height and mass. Our adaptation of the primary natural 'things' – rocks, vegetation, and water – to the urban environment lends a nostalgic meaning or sacredness to the site. Though what most people conceive to be 'natural' is no longer present on our site, the use of materials gesture to a distant, more natural past in St. Paul all while maintaining a nod toward the future.

COSMIC ORDER

Cosmic order refers to our ability to understand organization in constant states of flux. Such organization is usually based on the course of the sun; however, it can also be recognized from geographical forms as well. In most instances, the sun places importance on the cardinal directions of North, South, East and West. In Egypt, on the contrary, importance of direction is symbolized by not only the sun but by the natural flow of the Nile as well. Midway Station follows the understandings of cosmic order by orienting itself on the already defined forms of St. Paul's street grid. Importance of direction is also placed towards the two downtown centers of Minneapolis and St. Paul in the West and East directions.

CHARACTER

Character is making the most of a site and all that it is worth. For example, fertile soil thirsts for farmland, mountaintops reach towards the gods and valleys sing to their hillsides. "What does the land want to be?" For Midway Station, character influenced both program and form. The site in which the structure lies is very shallow but wide, linear in nature. It is located along the University Avenue commercial corridor and adjoins the new Green Line Light Rail system along with multiple bus routes. In order to accommodate, the station is true to the linear form of the site and linked closely to the transit systems. Also, multiple forms of commercial activity are present: retail spaces, offices, and services.

LIGHT

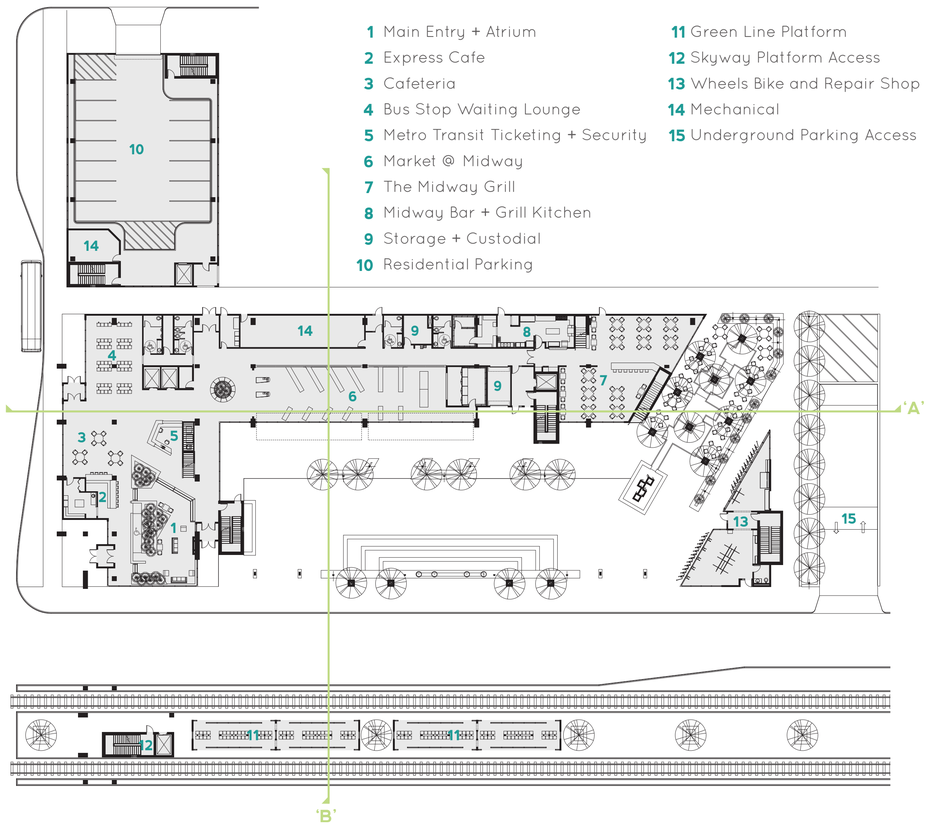
Light is a source of illumination, a symbol for the divine and an energy constantly sought after. In our transit hub design, light largely influenced the development of our program and its spatial layout. Equipped with high, floor-to-ceiling windows, the station benefits from vast amounts of natural daylight. Flooding into the interior spaces, the light not only allows for passive heating in the winter, but it also illuminates deep into the interior spaces. Our program reflects this advantage, with our most commonly used spaces being on the southern portion of our building with the less used spaces, mechanical etc., on the north half.

TEMPORAL RHYTHMS

Place is directly affected by all items of that natural world that are constanty changing, and the phenomena which distiguishes place cannot be separated from these rhythms. Vegetation, light, seasons and temperature, for example, influence a variety of design Mdecisions for the built world. Hamline-Midway reflects these decisions by showcasing them through programmatic elements. In the exterior open space, progrommatic uses revolve around the seasons, time of day, the stages of vegetation and weather. On the interior of the building, day-to-night hours affect the occupant load, while the seasons and climate affect the openings and closings of The Midway Grill patio and the market's breezeway.

8390 | ARCH 772 Design Thesis Spring Semester 2014 | Colby Lee Judovsky | Ganapathy Mahalingam | ArcGIS, Autodesk 360, AutoCAD 2014, Revit 2014, Adobe Illustrator, Adobe Photoshop, Sketchup Pro, Box Cloud Storage
7885 | LA 572 Design Thesis Spring Semester 2014 | Nathan Wade Stottler | Matthew Kirkwood + Dominic Fischer | ArcGIS, Autodesk 360, AutoCAD 2014, Revit 2014, Adobe Illustrator, Adobe Photoshop, Sketchup Pro, Box Cloud Storage

FIRSTLEVEL

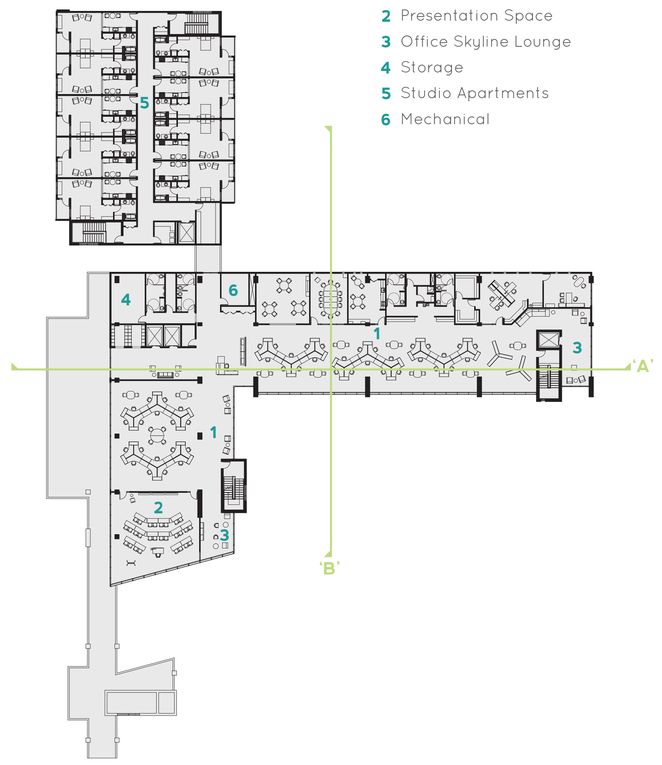


1 Main Entry + Atrium
2 Express Cafe
3 Cafeteria
4 Bus Stop Waiting Lounge
5 Metro Transit Ticketing + Security
6 Market @ Midway
7 The Midway Grill
8 Midway Bar + Grill Kitchen
9 Storage + Custodial
10 Residential Parking
11 Green Line Platform
12 Skyway Platform Access
13 Wheels Bike and Repair Shop
14 Mechanical
15 Underground Parking Access

SECONDLEVEL

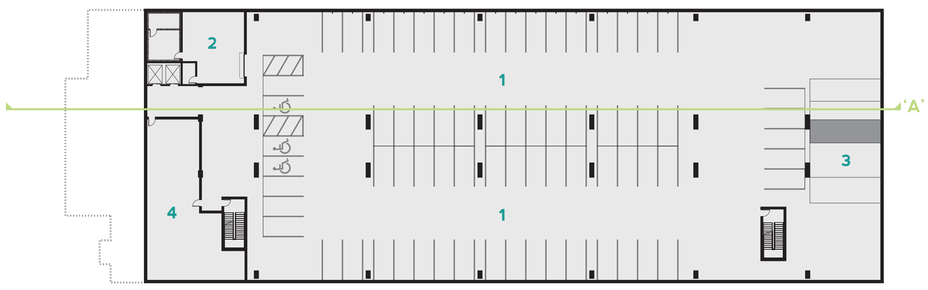
1 Open to Below
2 Greenline Waiting Lounge
3 Passenger Lounge
4 Bus Stop Waiting Lounge
5 Metro Transit Offices
6 The Midway Bar
7 The Midway Bar + Grill Patio
8 Studio Apartments
9 Skyway
10 Mechanical

THIRDLEVEL



1 Leasable Office Space
2 Presentation Space
3 Office Skyline Lounge
4 Storage
5 Studio Apartments
6 Mechanical

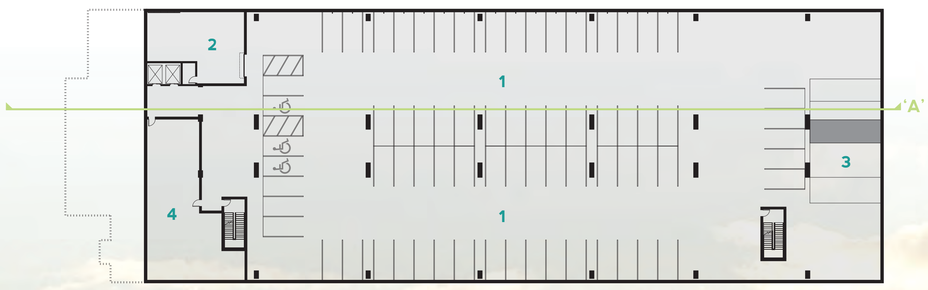
SUBGRADEPARKING01



1 Short + Long Term Facility Parking
2 Market @ Midway Storage + Dropoff
3 Parking Access Ramp
4 Mechanical + Storage

* 146 Vehicle Parking Stalls with 6 Handicap Accessible
* Room for Motorbike Parking

SUBGRADEPARKING02



SEASONALUSES

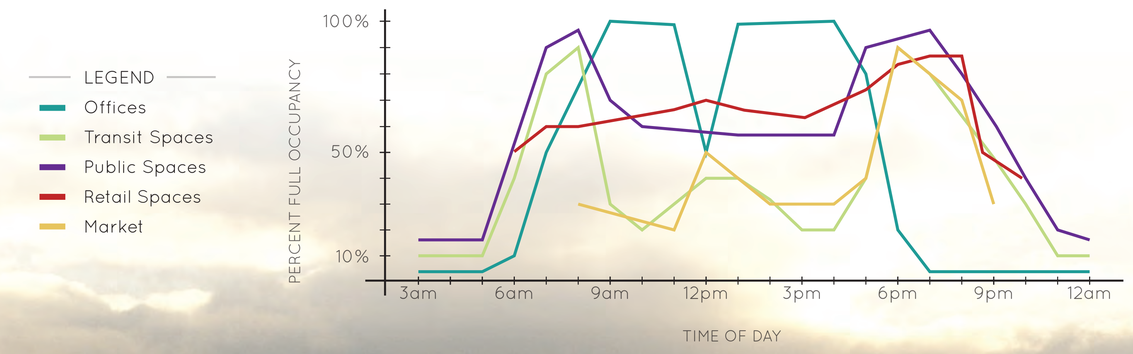
WINTER
Snowman Building Contests
Ice and Snow Carving Displays
Holiday Light Display
Winter Bike Storage for Residents
Food Carts - Hot Drinks
Cross Country Skiing in the Alley Bike Lane
'North Pole' Display and Holiday Tree Sales
Neighborhood Winter Festival
Snowtire Bike Race

SPRING
Lounge and Patio Furniture
Local School Art Shows
Standing Canopy Heaters around Furniture
Fountains Begin in Late Spring
Market Opens to Outside in Late Spring
Bike Season Begins
Street Performers
Food Carts
Gardening Fairs

FALL
Farmers Market
Market is Open through Early Fall
Fountains Remain Active through Early Fall
Lounge and Patio Furniture
School and Local Art Shows
Standing Canopy Heaters around Furniture
Street Performers
Food Carts
Bike Season Closes

SUMMER
Farmers Market
Market is Open to Outside
Fountains Remain Active
Craft and Art Fairs
Food / Cooking Contests
Neighborhood Festival
Concerts
Street Performers
Food Carts

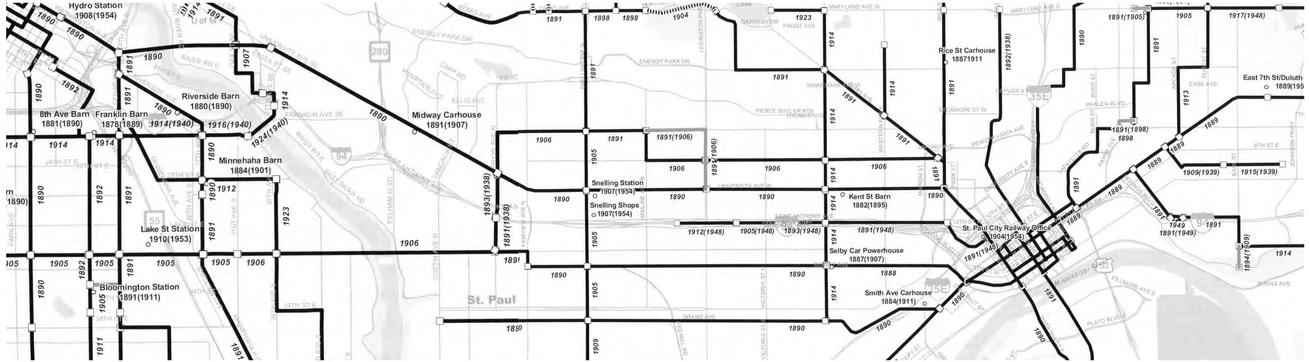
ACTIVATEDSPACES



1920s TCRT promotional poster

HISTORICCONTEXT

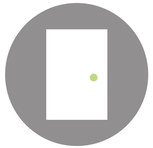
Transit development in St. Paul began with the growth of residential suburbs outside of the city's downtown center in the late 19th century. In the era before the automobile, the Twin Cities Rapid Transit Company was formed to provide transportation for the residents of these suburbs. Though the streetcar was eventually phased out by the bus, and the tracks paved over, the framework it provided for the building of St. Paul remains to this day, supporting the city into the future. This thesis aims to bring that framework back to greater prominence by restoring the automobile-free lifestyle that the streetcar provided to St. Paul. By shaping the lifestyles of the residents of Hamline-Midway and all of St. Paul around the light rail rather than the automobile, public transit in the Twin Cities can transcend its role as a utility and become a symbol of the cities it serves. It is time for a return to a close association between a city and the way it is experienced.



Major TCRT facilities in Minneapolis and St. Paul during the electric streetcar period of 1890 to 1954. The streetcar lines appear on a modern base map, which includes freeways, in order to highlight how certain parts of the city have changed.

OPENSPACEDESIGN

ELEMENTS OF THE PUBLIC SQUARE



PORTAL

The overarching goal of a TOD in Hamline-Midway is focused upon the creation of a destination; however, the specific purpose of our design is not on destination creation. Rather, our design seeks to create a transportation portal for the neighborhood. It is a launching point for those venturing into other parts of the metropolitan area, and it is a landing point for those who come to visit the larger destination that has been envisioned for Hamline-Midway. The design of our spaces are therefore not geared to be a final destination in and of themselves; rather, they are laid out strategically to elevate the status of transit in the public eye and to facilitate ease of use for the transit infrastructure.

ENCLOSURE

Once a user has entered a public open space, two things affect the feeling of comfort that user will have; the first of these is enclosure. The more enclosure a space has, the more comfortable a user will generally be when occupying that space. Our design generates enclosure through a number of methods. Principally, a seamless enclosure is provided on the north and west sides of the square by the transit station building itself. On the east side, the detached bicycle shop and the trees in the café area provide an appropriate level of enclosure. The south side of the square is left open in order to address the street, but a partial barrier is provided in the form of a short retaining wall and a vegetation screen.

SCALE

Scale is the second factor that influences a user's comfort in an open space. Different scales are appropriate for different types of open space. A regional park has a different sense of scale than a neighborhood playground, and each space needs to be designed with this in mind. If spaces that require intimacy are designed too large, they won't function. Our design is scaled appropriately for its intended use. The space is not so large that users have no sense of direction or purpose, yet it is not too small that it cannot handle the flow of traffic through it. It has also been scaled appropriately for its economic market and TOD station type by identifying the correct size of the target user group,

ADDRESSING THE STREET

Street activity is key to the vitality of any public space. Cities are designed around streets they carry the flow of people and the energy they embody. A public space adjacent to the street, though it may need to be shielded from the noise and danger, must also relate to that street in order to draw energy and pedestrian traffic from it. Our design provides a permeable shield to reduce noise pollution from the street, but it also gestures through form and gate to those passing by. As it provides glimpses of the activity and features within, it becomes not only a place to be, but also a place to see. As the street life along University Avenue improves with the envisioned growth, our station will become a focal point on the street.

ACCOMODATION

Creating a space that is form-fitted for users is crucial to the success of a public square. By paying attention to small details in the shaping of site structures, the space can become both more inviting and usable for pedestrians. This particularly applies to the creation of seating in the public square. By designing retaining walls, planter boxes, and dividing walls to the correct parameters, these elements can serve dual purposes by providing seating for passers-by. Accommodation also includes avoiding site elements and design parameters that would deter people from using the site. Our design takes all of this into consideration by designing for the user in all details by scaling and sizing elements to be pedestrian-friendly.

PLACE FEATURES

Place features are those attributes of a public space that set it apart from other spaces. The arrangement of trees, the presence of water, the availability of food, and the inclusion of an iconic feature are a few key examples. Trees provide protection from sun and noise and can also provide overhead enclosure. Water provides an interactive feature for users, while also creating a cooling micro-climate and providing noise-cancellation. Food increases the attractiveness of a space to passers-by. People who might not otherwise utilize a public space are more likely to do so if food is being sold within. Finally, iconic features heighten the identity of a public space, making it more recognizable. Our design utilizes all four of these features.

TRANSITDESIGN

GOALS OF TRANSIT ORIENTED DEVELOPMENT

LOCATION EFFICIENCY

Two main benefits arrive to residents of the neighborhood when location efficiency is achieved: lower vehicle-miles travelled and a semblance of economic justice through the availability of transit and amenities in the TOD. If the station area can be located correctly, the need for personal automobiles is significantly decreased. Our design is sited with just this in mind; its proximity to schools, a variety of residence options, and both local and regional scale retail – not to mention a variety of transportation options – allows a greater number of residents to take advantage of its offerings. This increase in acessibility is a direct result of the reduced need for automobile dependence.

MIX OF CHOICES

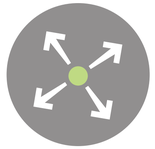
Mix of choices, in the case of our design, applies primarily to increased access to a larger mix of transportation options. Our site accommodates equally to light rail, bus, vehicular, bicycle, and pedestrian commuters. The outcome of this is that the envisioned TOD can provide a mix of choices on all other scales: by bringing a greater mix of users to the site, the neighborhood will be able to provide a greater mix of housing types, retail options, and activity choices. By promoting a mix of choices, the design will transcend the bounds of catering to any one user group – our site caters to users from all economic classes, geographic locations, and household types.

PLACE-MAKING

Place making brings three main benefits to the neighborhood: creation of a healthy, pedestrian-oriented environment, a pleasant aesthetic experience for the pedestrian, and a greater likelihood of public funding for the TOD. At Hamline-Midway, this meant that we were starting from scratch: our site was simply an open space, not a place where people want to be. Our resulting design is oriented entirely towards the pedestrian, while being adapted to the existing form of the neighborhood. It accommodates for users who may arrive via any mode of transit, while encouraging pedestrian and public transit – all while adding a previously lacking aesthetic element to the site.

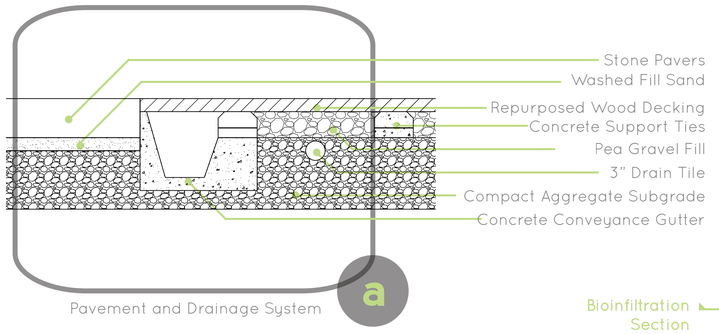
VALUE CAPTURE

Value capture is about providing economic benefits for all of the actors in the planning, building, and growth of a TOD. Value benefits come in both the short term and the long term, and different actors receive their benefits at different times. Though our focus has primarily been on design, it is important to consider the viability of the project – if we fail to look into economic feasibility, our project loses any merit it may have. Our design, therefore, is tailored to creating value in the short term, in order to increase the viability of public transit and the TOD in the long term. By providing a portal as a strong foundation for the TOD and including uses that see profit immediately, our project can see viability across all time scales.



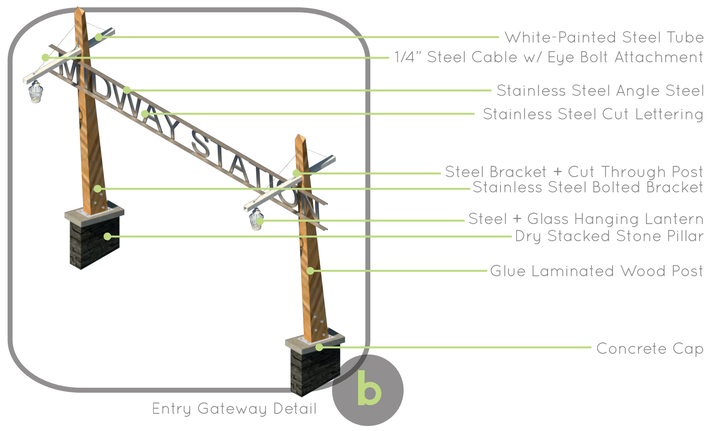
PLACE-NODE TENSION RESOLUTION

The goal of any TOD, including our vision at Hamline-Midway, is to create a place. However, the nature of any TOD is that before it becomes a place, it functions simply as a node. In this case, the intersection of Hamline and University Avenues and the train platforms was not a place or destination, it was simply a crossing of routes. Though our design still functions primarily as a portal – an elevated form of node – this elevation successfully resolves the tension between that node and the larger place destination that has been envisioned for the TOD. This resolution comes in the form of blending the elements of a node (the intersection of transportation options) and those of a place (uses that compose a destination).

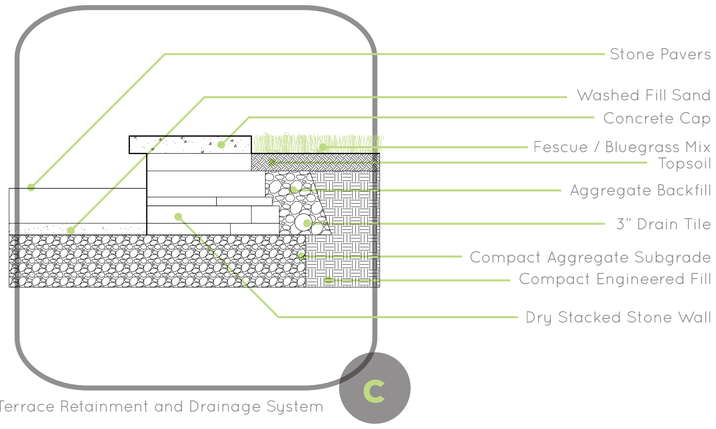


Pavement and Drainage System

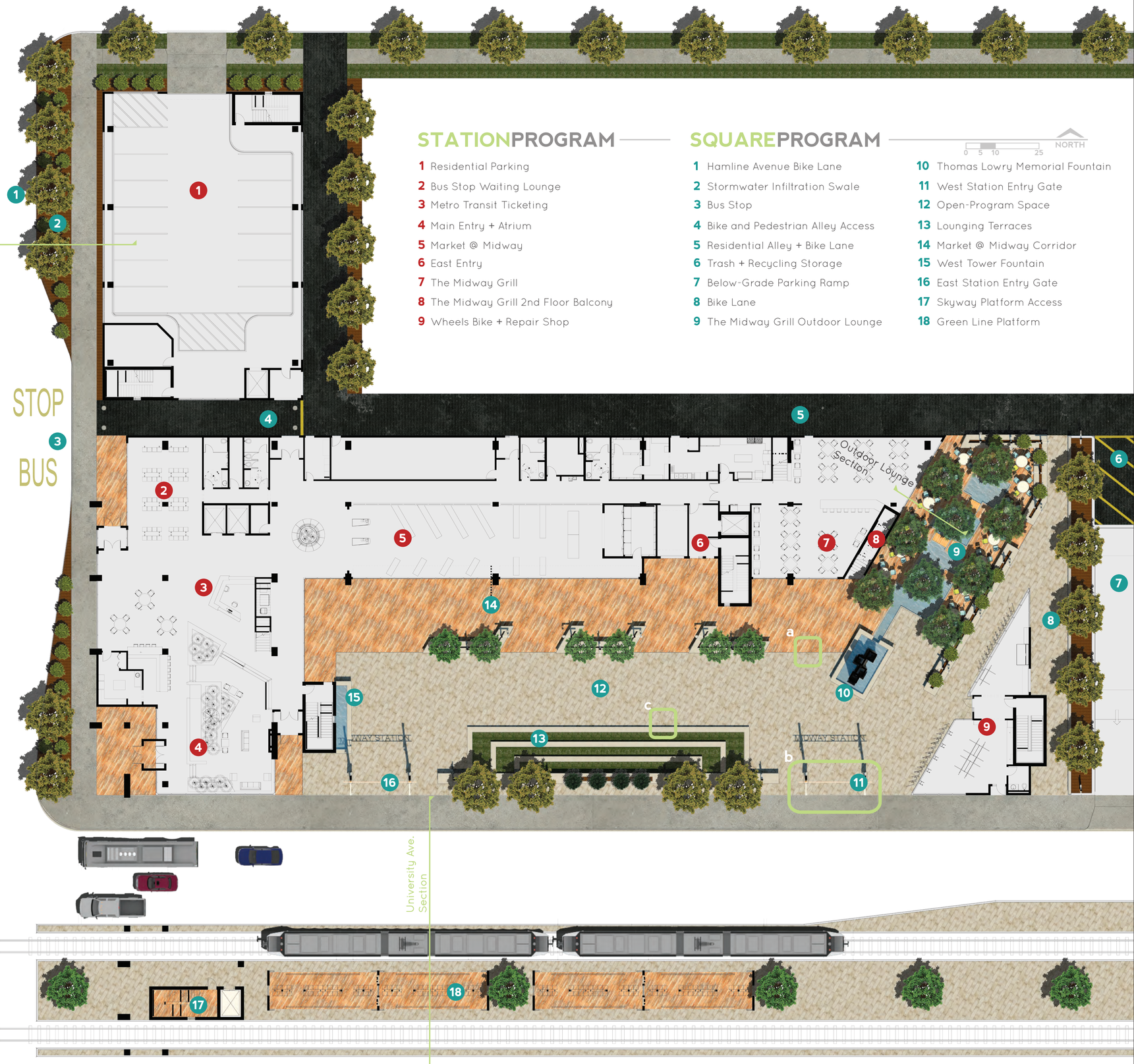
Bioinfiltration Section



Entry Gateway Detail



Terrace Retainment and Drainage System



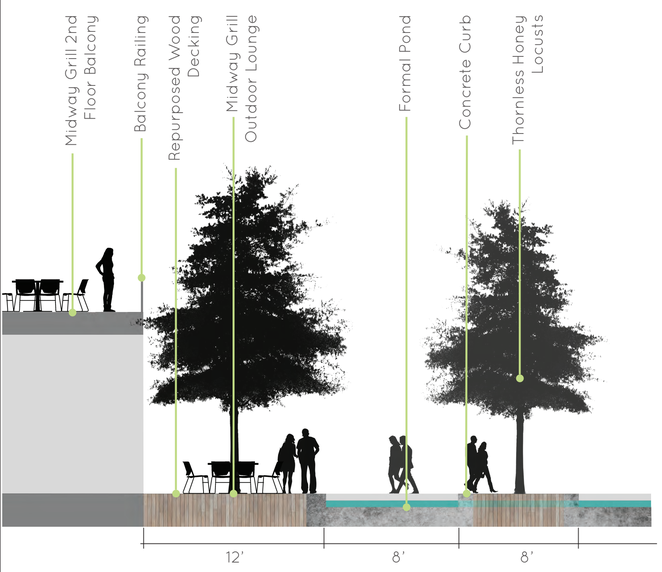
STATIONPROGRAM

1 Residential Parking
2 Bus Stop Waiting Lounge
3 Metro Transit Ticketing
4 Main Entry + Atrium
5 Market @ Midway
6 East Entry
7 The Midway Grill
8 The Midway Grill 2nd Floor Balcony
9 Wheels Bike + Repair Shop

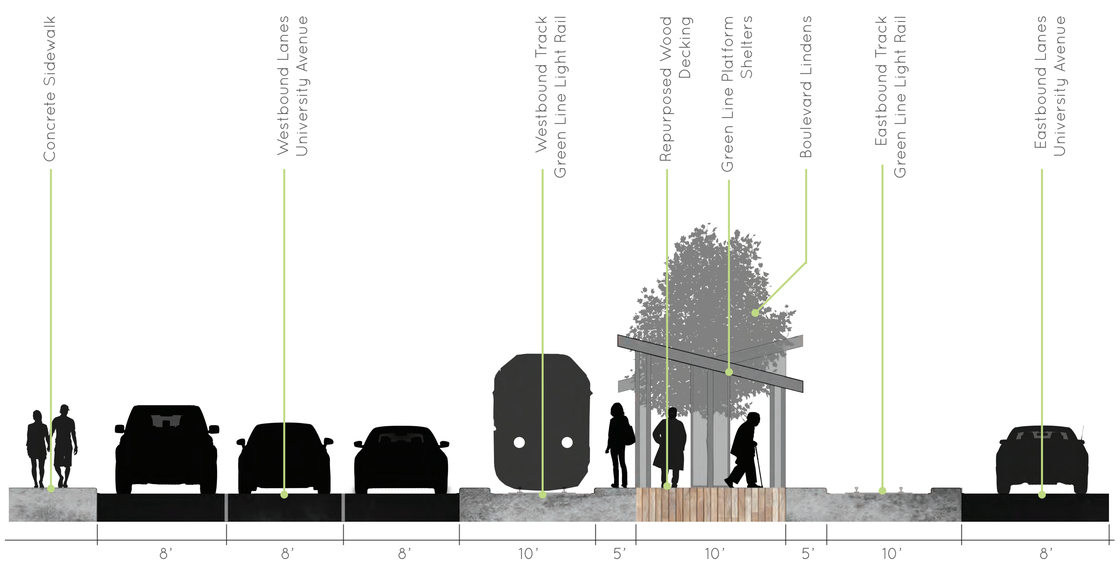
SQUAREPROGRAM

NORTH
0 5 10 25

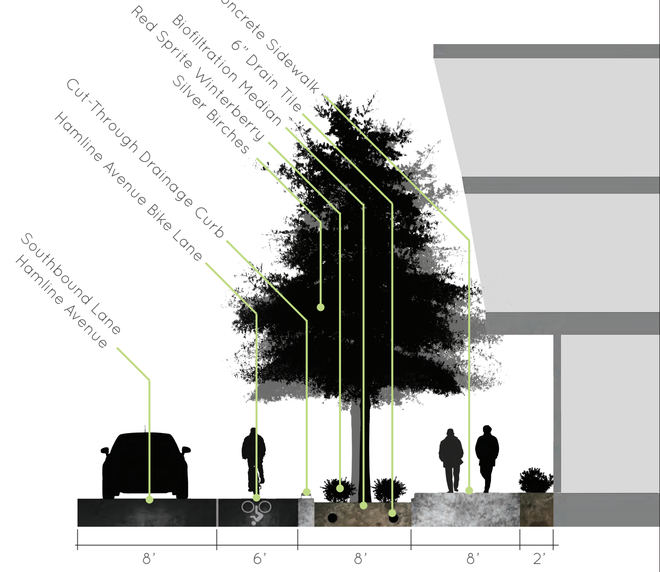
1 Hamline Avenue Bike Lane
2 Stormwater Infiltration Swale
3 Bus Stop
4 Bike and Pedestrian Alley Access
5 Residential Alley + Bike Lane
6 Trash + Recycling Storage
7 Below-Grade Parking Ramp
8 Bike Lane
9 The Midway Grill Outdoor Lounge
10 Thomas Lowry Memorial Fountain
11 West Station Entry Gate
12 Open-Program Space
13 Lounging Terraces
14 Market @ Midway Corridor
15 West Tower Fountain
16 East Station Entry Gate
17 Skyway Platform Access
18 Green Line Platform



OUTDOORLOUNGESECTION



UNIVERSITYAVESECTION



BIOFILTRATIONSECTION